

# Case Study



## Pre-feasibility Study for Pyrolysis Installation

### Team

Tad Dritz, P.E.

### Client

Energy Investment Firm

### Project Number

21101



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## Summary of Client and Challenge They Faced

An energy investment firm was considering investing in a company with a proprietary pyrolysis technology. Their potential investment target was seeking funds to deploy their technology on California nut farms to capitalize on new regulations that will restrict open pit burning of biowaste. The energy investment firm engaged LEC Partners (LEC) to provide expert advice regarding the company's pyrolysis technology and project feasibility prior to making an investment decision.

## Our Approach to the Solution

LEC conducted an evaluation of key claims made by the investment target and an assessment of the impact on projects. The veracity of each claim was assessed on a 1 to 5 scale, where 1 is 'highly unlikely' and 5 is 'confirmation'. However, due to lack of sufficient information, such as signed offtake agreements, no claim could be completely confirmed.



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### Client Results and Benefits

Due to the relatively low capital cost of pyrolysis, multiple entities have explored on-site conversion of agricultural waste into valuable products. However, this is challenged by the number of products from pyrolysis units and the required quality of these products to meet customer needs. Despite past failures, converting AG waste into higher value products and sequestering carbon has an undeniable appeal and holds a lot of potential for the right process technology.

The key takeaways for the pre-feasibility study were:

- AG process could not be confirmed as 'proven,' primarily due to lack of documentation and operational data.
- Value of products is likely inflated due to overestimating market prices and underestimating challenge of making on-spec products.
- Based on a high-level assessment, CAPEX and OPEX estimates provided by the investment target were likely well below expected.

LEC saved the energy investment firm from making a costly mistake on an investment in a technology which has yet to achieve proven profitability when commercialized.